

## Missouri Public Port Authorities: Assessment of Importance and Needs

An In-house study by Organizational Results  
in cooperation with the Multimodal Division

### MoDOT Summary Statement

*Based on this data, we feel comfortable concluding that:*

- 1) The Missouri River has been and continues to be a source of wealth for the state.*
- 2) Barge traffic on the Missouri River offers tremendous economies of scale.*
- 3) Port authorities have diverse needs totaling millions of dollars each year.*
- 4) There is a common need for improved navigation of the Missouri River.*

### MoDOT Project Overview

The purpose of this study was to assess the importance and needs of Missouri's fourteen Public Port Authorities. Importance in this case includes size, employment, beneficiaries, potential for improvement, and cargo quantities in terms of annual tonnage and dollar value. Needs in this case include general needs for navigation and specific Port Authority needs for infrastructure, equipment, or support facilities as reported by the Public Port Authorities.

### MoDOT Staff Findings

#### **Wealth**

Missouri's waterways were our first resources, in the form of natural transportation. Of all our resources, they are our most renewable. All other resources were brought to their shores and exchanged for the wealth that built Missouri. The lasting effects of our waterways are shown in the map of Figure 1, showing higher median household incomes in darker reds, from the 2000 census. Nearly all counties with the highest household income are waterway counties.

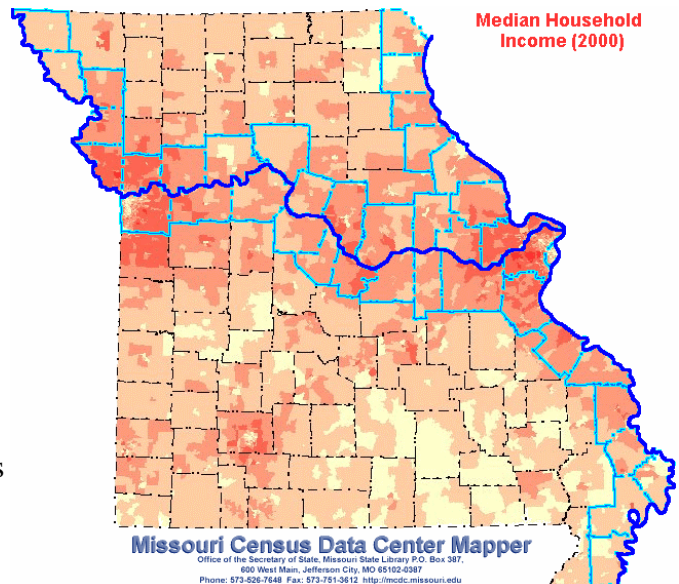


Figure 1, Wealth Along Missouri Waterways



## **Economy of Scale**

Most people see barges while crossing major bridges. Barges in the distance seem small compared to trucks in the next lane. But the picture in Figure 2 shows the actual scale of barges and trucks. A one barge tow is near many big trucks and heavy equipment, dwarfing them to the point of making them tiny in comparison. This is only one barge while a "standard tow" is 15 times bigger, 15 barges and one towboat (and a "large tow" on the Mississippi River can be 40 times bigger). The economy of scale means that every standard tow blocked between Kansas City and Saint Louis requires replacement by a convoy of semi-trucks on I-70, fully loaded, 45 miles long, burning 75,000 more gallons of diesel fuel. *(Calculations are shown in the full report.)*



*Figure 2, Economy of Scale, SEMO Port Authority.*

Tows cannot replace all trucks, but they have an economy of scale which trucks, trains, and planes cannot match. Waterways carry more weight than possible with any pavement, railway, or runway. Waterways reach shores not accessible by rail or pavement. They put Missouri in the global market, with massive commodities worth tens of millions of dollars per standard tow. They reduce transportation costs of bulk items for business and agriculture—such as source materials, final products, fertilizers, feed, and crops. Waterways make Missouri's farmers and businesses competitive against the 41 states that also have ports or waterways, including most states around Missouri. Waterways carry tens of millions of tons of cargo worth billions of dollars annually. Public Port Authorities in particular reported handling millions of tons of cargo worth hundreds of millions of dollars annually, primarily benefiting farmers.



## **Port specific needs**

There are fourteen Public Port Authorities, plus some 200 other ports, private and government, and hundreds of related businesses in shipping, industry, commerce, and agriculture. The fourteen Public Ports reported diverse needs, unique to each of them but totaling millions of dollars per year, mostly in terms of infrastructure improvements. Some needs were reported as critical but the most common priority was short-term.

## **Common waterway needs**

Missouri has 25 counties adjacent to the Missouri River, and more counties neighboring them. There are more than 50 small communities adjacent to the Missouri River, plus large cities and metropolitan areas. Three public ports and dozens of private ports also benefit from the Missouri River, and all of these have a common need for improved navigation on the Missouri River. The river has the potential to reach more farmers than either the Arkansas or Illinois Rivers. It has the potential to carry cargo equal to 80 percent of a busy interstate highway parallel to I-70, which would be worth billions of dollars per year and would primarily benefit Missouri farmers. The river also needs to be environmentally healthy and safe in order to provide water resources, recreation, land value, and flood protection. Making the river navigable, healthy, and safe is a tough challenge, beyond the scope of this report, yet potentially worth billions of dollars annually to Missouri.

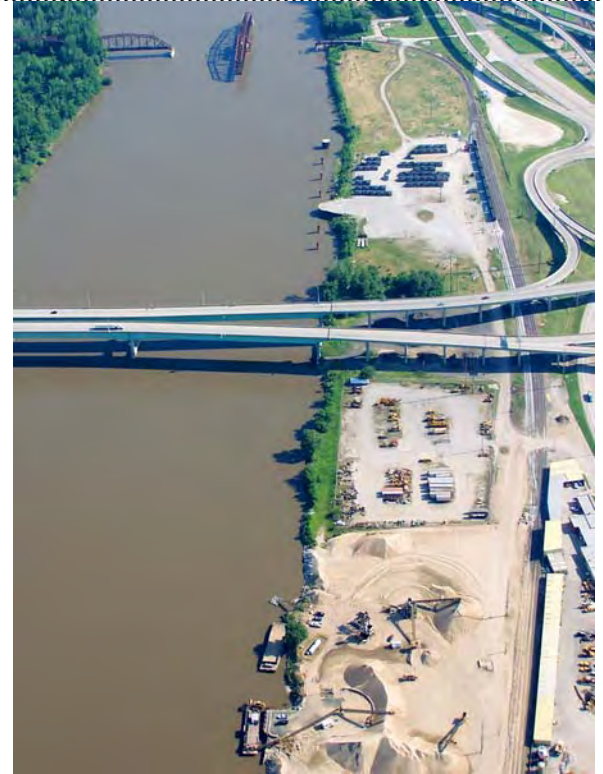


*Figure 3, New Madrid County Port Authority with Barges, Trucks and Trains.*

## Fast Facts

### **Importance**

- ◆ Waterway transportation is an important part of a total transportation system. It is able to carry the largest cargo at the least costs, in a grade-separated system that connects Missouri to the wealth of the global market place.
- ◆ One full, standard tow between St Louis and Kansas City frees up 900 semi trucks to carry other loads, and is equal to a convoy of trucks 45 miles long on I-70 that would burn 75,000 more gallons of fuel, increase congestion, and increase safety problems.
- ◆ In Missouri, 39 counties are waterway counties with another 44 close enough to benefit from waterways, which is about 70 percent of Missouri.
- ◆ Missouri's waterways carry more than 34 million tons of cargo annually, worth an estimated \$2 billion annually.
- ◆ Missouri's Public Port Authorities reported more than 2.7 million of tons of cargo annually; worth an estimated \$190 millions annually, primarily farm supplies and products.
- ◆ Cost savings are most beneficial to Missouri Farmers as primary users of waterway and by reducing the transportation costs of bulk fertilizers, feed, and crops.
- ◆ The Missouri River has a potential to reach more farmers better than either the Arkansas or Illinois Rivers, carry cargo equal to 80 percent of a busy interstate parallel to I-70, encourage farm economies in most Missouri counties, and carry cargo worth billions of dollars per year.



*Figure 4, St Joseph's Highway, Railway, and Waterway Transportation Networks.*

### **Needs**

- Different ports have different needs totaling millions of dollars per year and the needs should be evaluated on an individual basis.
- Infrastructure improvements are the most common need, as are short-term needs.
- Most of the individual port needs, and most of the cargo, are on the Mississippi River, especially south of St Louis.
- Improved navigation on the Missouri River is a common economic need for more than 23 Missouri counties, more than 50 small Missouri communities, 3 public ports, dozens of private ports, and farmers in most Missouri counties.